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Topics in Minority Health

Tuberculosis in Minorities — United States

In 1985, 22,201 cases of tuberculosis were reported to CDC, for a rate of 9.3/100,000 population (*1*). Of the 22,170 cases of known race, 11,524 (52.0%) were in whites (including 3,032 white Hispanics), and 10,646 (48.0%) were in nonwhites (7,719 blacks, 2,530 Asians/Pacific Islanders, and 397 American Indians/Alaskan Natives). The rate for nonwhites was 5.2 times that for whites (29.6 as compared with 5.7/100,000 population) (Table 1). The ratios of age-specific rates for nonwhites to those for whites ranged from 4.3 for children <5 years of age to 9.0 for adults 25 to 44 years of age.

Excess tuberculosis morbidity in nonwhite minorities was determined by using a methodology similar to that employed by the Department of Health and Human Services Secretary's Task Force on Black and Minority Health (*2,3*). Excess morbidity was defined as the dif-

TABLE 1. Reported tuberculosis cases and rates per 100,000 population in whites and nonwhites and estimated excess tuberculosis morbidity in nonwhites, by age — United States, 1985

	White*		Nonwhite*				
Age group	Reported cases	Case rate	Reported cases	Case rate	Rate ratio†	Expected cases§	Excess cases (%)¶
0-4	400	2.7	389	11.6	4.3	92.9	296 (76.1)
5-14	198	0.7	274	4.2	6.0	46.7	227 (82.8)
15-24	725	2.2	946	13.8	6.3	151.6	794 (83.9)
25-44	2,647	4.2	4,105	37.7	9.0	458.6	3,646 (88.2)
45-64	3,328	8.5	2,801	50.2	5.9	471.5	2,330 (83.2)
≥65	4,217	16.4	2,125	76.2	4.6	456.5	1,669 (78.5)
Total	11,515	5.7	10,640	29.6	5.2	1,677.8	8,962 (84.2)

*Whites include Hispanic whites. Nonwhites include blacks, American Indians/Alaskan Natives, and Asians/Pacific Islanders. A total of 46 of the 22,201 reported cases were excluded from this analysis because there were no data on age or race.

†Nonwhite rate : white rate.

§Age-specific rates for whites multiplied by the 1985 population estimates (Bureau of the Census) for nonwhites in the corresponding age groups. Total expected cases is the sum of expected cases in each age group.

¶Reported cases minus expected cases.

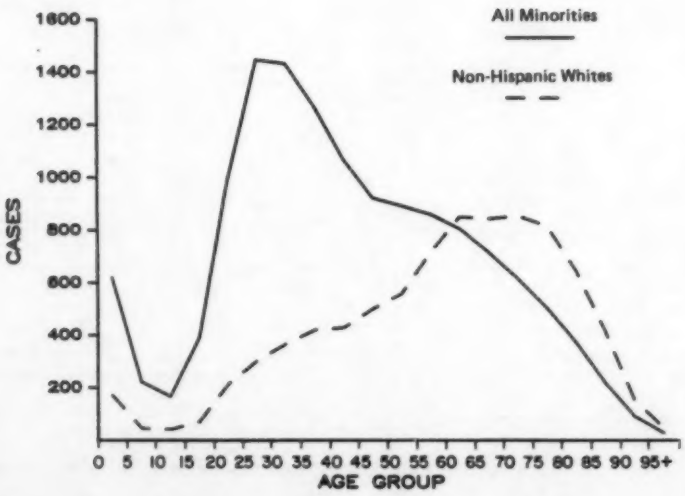
Tuberculosis – Continued

ference between the number of cases observed in the minority population and the number that would be expected if the minority population had the same age-specific rates as the non-minority population. If nonwhite minorities had experienced the same age-specific morbidity rates as whites, there would have been 1,678 tuberculosis cases among patients for whom race and age were known, instead of the observed 10,640 cases (Table 1). Thus, 8,962 (84.2%) of the tuberculosis cases in nonwhites can be considered as excess cases. The 25- to 44-year age group had the largest number of excess cases (3,646).

In 1984, 1,729 deaths from tuberculosis were reported to the National Center for Health Statistics, for a mortality rate of 0.73/100,000 population. There were 1,047 deaths among whites and 682 among nonwhites. The mortality rate for nonwhites was 3.7 times that for whites (1.94 as compared with 0.52/100,000 population). If nonwhite minorities had experienced the same age-specific mortality rates as whites, the expected number of tuberculosis deaths in which race and age were known would have been 125, instead of the 681 actually reported. Thus, 556 (81.6%) of the tuberculosis deaths in nonwhites can be considered as excess deaths.

An analysis by race and ethnicity of tuberculosis cases reported in 1985 shows that 38.3% (8,453) of 22,060 cases among patients with known race and ethnicity occurred in non-Hispanic whites, and 61.7% (13,607) occurred among all racial and ethnic minorities (blacks, Asians/Pacific Islanders, American Indians/Alaskan Natives, and Hispanics). Figure 1 shows reported tuberculosis cases, by age, among non-Hispanic whites and all racial and ethnic minorities. Patients among minorities in general were much younger than non-Hispanic white patients. Among non-Hispanic whites, the 70- to 74-year age group had the greatest number of reported cases; while in minorities, the number of cases was highest in the 25- to

FIGURE 1. Frequency distribution of reported tuberculosis cases, by age, race, and ethnicity – United States, 1985



Tuberculosis — Continued

29-year age group. Members of minority groups accounted for 10,267 (72.8%) of the 14,097 patients who were <60 years of age and for whom age, race, and ethnicity were known. Non-Hispanic whites accounted for 4,616 (58.1%) of the 7,948 patients ≥60 years of age.

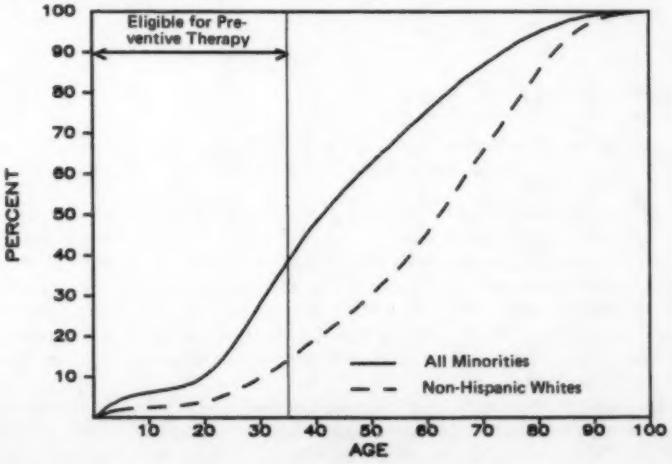
As shown in Figure 2, the median age for patients with tuberculosis was 62 years for non-Hispanic whites and 41 years for minorities. Fourteen percent (1,209) of non-Hispanic white patients were ≤35 years of age, compared with 39% (5,266) of patients among racial and ethnic minorities.

Reported by Div of Tuberculosis Control, Center for Prevention Svcs, CDC.

Editorial Note: Over the past three decades, rates of tuberculosis in the United States have been consistently higher among racial minorities than among whites. Furthermore, while the number and rates of tuberculosis cases have decreased in the United States, the rate of decline has been much slower for nonwhites than for whites. As a result, the proportion of cases occurring among nonwhites increased from 23% in 1953 to 48% in 1985. In the United States in 1985, more than three-fifths of all reported cases occurred among racial and ethnic minorities.

Tuberculosis will probably disappear among non-Hispanic whites much sooner than it will among minorities. This is a result of the fact that, among non-Hispanic whites, tuberculosis has become primarily a disease of the elderly; whereas, among minorities, it is found mainly in the young. The older cohort of infected non-Hispanic whites will be replaced by a younger cohort with little or no infection. Furthermore, in most of these older persons tuberculous infection occurred many years ago, and, thus, their risk of developing active tuberculosis is low (*4*). As a result, transmission from older infected persons is relatively unlikely. In addition, transmission to children by adults beyond child-raising age is also unlikely. This is suggested by the much smaller proportion of childhood cases found among non-Hispanic whites (Figure 2).

FIGURE 2. Cumulative frequency of reported tuberculosis cases, by age, race, and ethnicity — United States, 1985



Tuberculosis — Continued

In contrast, the number of tuberculosis cases among minorities peaks in the 25- to 34-year age group. These patients come from the much larger pool of persons who are infected with *Mycobacterium tuberculosis* and who may potentially develop active disease and infect their children. Some of these children may then progress to active tuberculosis, as indicated by the larger proportion of childhood cases among minorities. Each of these childhood tuberculosis cases should be viewed as a sentinel health event reflecting ongoing transmission in the minority population (*5-7*).

Nevertheless, almost 40% of the cases among minorities occurred among persons <35 years of age and were, therefore, potentially preventable (*8*). Thus, it remains of particular importance to identify young adults, regardless of race and ethnicity, who are infected with the tubercle bacillus and are eligible for preventive chemotherapy. Preventive therapy is particularly important in protecting contacts of patients with tuberculosis from infection and disease (*8*).

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Epidemiologic Notes and Reports

Use of Supplements Containing High-Dose Vitamin A — New York State, 1983-1984

As part of an epidemiologic study of the risk for birth defects associated with maternal use of 13-cis retinoic acid (Accutane®) during pregnancy, the Reproductive Health Section of the Bureau of Environmental Epidemiology and Occupational Health in the New York State Department of Health interviewed 492 women who had delivered live-born infants without birth defects during the period from April 1983 through February 1984. The interviews, which were conducted from August 1985 through August 1986, included questions concerning maternal use of drugs and vitamin supplements just before and during pregnancy. Dietary habits were not ascertained.

Of this group, 90.7% (446/492) took some prescription or over-the-counter medication. These medications represented 48 drug classes. A supplement containing vitamin A was taken by 81.1% (399/492). Of all the women interviewed, 0.6% (3/492) had taken supple-

Vitamin A — Continued

ments containing ≥25,000 international units (IU) of vitamin A daily, and 2.6% (13/492) had taken supplements containing 15,000-24,999 IU of vitamin A daily.

Reported by K Costas, R Davis, N Kim, PhD, AS Stark, DrPH, S Thompson, HL Vallet, MD, MPH, DL Morse, MD, State Epidemiologist, New York Dept of Health; Div of Birth Defects and Developmental Disabilities, Center for Environmental Health, CDC.

Editorial Note: These observations show that some pregnant women take supplements containing high doses of vitamin A. Because of the potential teratogenicity of excessive vitamin A when taken during early pregnancy (the embryonic period of organogenesis), this finding raises a public health concern. Retinol, the form of vitamin A usually found in supplements, is a member of a group of biochemically related compounds called retinoids. Evidence about the teratogenicity of retinoids comes from three sources: 1) animal experiments, 2) case reports of defects among children born to women who used high-dose vitamin A supplements during early pregnancy, and 3) prospective studies of women who took a synthetic retinoid, 13-cis retinoic acid, during early pregnancy (*1,2*).

The pattern of malformations associated with 13-cis retinoic acid, which is prescribed for treatment of chronic cystic acne, parallels those found in animals exposed *in utero* to high doses of retinoic acid. A relative risk of 25.6 (95% confidence interval = 11.4-57.5) was estimated for the association between 13-cis retinoic acid and selected defects (external ear malformations, cleft palate, micrognathia, conotruncal heart defects, ventricular septal defects, aortic arch malformations, and brain malformations) in infants who were exposed during early pregnancy (*1*). Defects have also been observed among children born to women who took etretinate (Tigasan®), a retinoid prescribed for treatment of psoriasis, during pregnancy (*2*). Although the range of malformations potentially associated with maternal use of high-dose vitamin A supplements has not been well defined, defects observed among children born to women who took ≥25,000 IU of vitamin A per day during pregnancy include craniofacial, central nervous system, cardiac, urinary, and vertebral and other skeletal malformations (*2*).

13-cis retinoic acid is the only retinoid for which the teratogenic risk has been quantified in an epidemiologic study. The risk, if any, that may be associated with use of high-dose vitamin A during human pregnancy is not known.

The National Research Council's Committee on Dietary Allowances advocates a Recommended Dietary Allowance (RDA) of 1,000 retinol equivalents (RE) per day of vitamin A during pregnancy. This is equivalent to 3,300 IU of vitamin A obtained from a supplement as retinol or 5,000 IU of vitamin A obtained from the typical American diet in the forms of retinol and its metabolic precursors, beta-carotene and related compounds (*3*). The Committee on Dietary Allowances based its RDAs on the amounts that are adequate for maintenance of good nutrition in healthy persons. The Food and Drug Administration's (FDA) U.S. Recommended Daily Allowance (U.S. RDA) for vitamin A is 8,000 IU per day during pregnancy (*4*). This recommendation was developed as a standard for food labeling and composition regulations. In the United States, nearly all multivitamin supplements that are labeled for prenatal use contain no more than the U.S. RDA for vitamin A during pregnancy. However, multivitamin supplements intended for general adult use may contain much more than 8,000 IU of vitamin A.

Organogenesis often occurs before a woman is aware that she is pregnant. Because of this, women who are at risk for pregnancy should avoid taking supplements containing more than 8,000 IU of vitamin A per day (the U.S. RDA for pregnant women). Women who have questions about the use of vitamin supplements should consult their physicians.

Vitamin A — Continued

To learn more about the possible risks of using high-dose vitamin A during pregnancy, investigators at FDA are seeking to identify women who are currently pregnant and have taken high-dose vitamin A supplements just before or during early pregnancy. Health care workers are urged to report such women to the Epidemiological Operations Branch, Office of Regulatory Affairs, FDA, by calling (301)443-4667.

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TABLE I. Summary—cases specified notifiable diseases, United States

Disease	6th Week Ending			Cumulative, 6th Week Ending		
	Feb. 14, 1987	Feb. 8, 1986	Median 1982-1986	Feb. 14, 1987	Feb. 8, 1986	Median 1982-1986
Acquired Immunodeficiency Syndrome (AIDS)	216	318	N	2,089	1,364	N
Aseptic meningitis	51	111	91	482	497	510
Encephalitis: Primary (arthropod-borne & unspec.)	11	17	17	78	101	98
Post-infectious	-	-	2	3	6	7
Gonorrhea: Civilian	10,482	14,020	16,119	93,000	94,721	97,127
Military	144	254	410	1,809	1,538	2,459
Hepatitis: Type A	288	504	442	2,273	2,559	2,316
Type B	330	454	454	2,290	2,504	2,498
Non A, Non B	23	74	N	278	319	N
Unspecified	56	98	98	361	565	565
Legionellosis	4	10	N	59	65	N
Leprosy	-	4	4	24	31	26
Malaria	2	17	16	58	72	72
Measles: Total*	5	50	17	116	166	65
Indigenous	2	49	N	93	157	N
Imported	3	1	N	23	9	N
Meningococcal infections: Total	52	63	63	372	335	335
Civilian	51	63	63	371	335	335
Military	1	-	-	1	-	-
Mumps	323	65	69	1,562	280	370
Pertussis	35	69	27	197	223	156
Rubella (German measles)	2	12	11	22	35	45
Syphilis (Primary & Secondary): Civilian	381	431	582	3,387	2,794	3,263
Military	1	6	6	7	23	40
Toxic Shock syndrome	5	7	N	30	32	N
Tuberculosis	217	348	418	1,745	1,730	1,971
Tularemia	1	1	1	10	8	8
Typhoid fever	4	3	6	22	25	33
Typhus fever, tick-borne (RMSF)	-	1	1	6	6	7
Rabies, animal	49	71	84	322	452	452

TABLE II. Notifiable diseases of low frequency, United States

	Cum 1987		Cum 1987
Anthrax	-		
Botulism: Foodborne	-	Leptospirosis	2
Infant	4	Plague	-
Other	-	Poliomyelitis, Paralytic	-
Brucellosis (Ln. 1)	8	Psittacosis	7
Cholera	-	Rabies, human	-
Congenital rubella syndrome	-	Tetanus	2
Congenital syphilis, ages < 1 year	-	Trichinosis	2
Diphtheria	1	Typhus fever, flea-borne (endemic, murine)	1

*Three of the 5 reported cases for this week were imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending February 14, 1987 and February 8, 1986

Reporting Area	AIDS	Aseptic Menin-gitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	Cum 1987	1987	Cum 1987	Cum 1987	Cum 1987	Cum 1986	1987	1987	1987	1987	1987	Cum 1987
UNITED STATES	2,089	51	78	3	93,000	94,721	288	330	23	56	4	24
NEW ENGLAND	113	4	6	1	3,310	2,050	10	49	2	2	-	1
Maine	4	-	-	-	110	102	2	5	-	-	-	-
N H	4	-	-	-	59	56	-	-	-	-	-	-
Vt	-	1	1	-	21	37	-	-	1	-	-	-
Mass	66	3	3	-	1,132	896	6	36	1	1	-	1
R I	10	-	2	1	276	186	1	3	-	-	-	-
Conn	29	-	-	-	1,712	773	1	5	-	1	-	-
MID ATLANTIC	786	8	14	-	16,260	15,936	23	28	1	5	-	-
Upstate N Y	312	4	5	-	1,777	1,743	14	12	1	1	-	-
N Y City	310	-	3	-	9,843	9,843	-	-	-	1	-	-
N J	105	-	1	-	1,192	1,811	9	12	-	3	-	-
Pa	59	4	5	-	3,448	2,539	-	4	-	-	-	-
E N CENTRAL	121	17	24	-	10,434	13,956	21	43	4	8	3	-
Ohio	24	5	15	-	2,744	3,352	6	12	2	2	1	-
Ind	15	7	-	-	996	1,780	2	6	-	3	-	-
Ill	55	2	2	-	1,371	2,988	-	-	-	-	-	-
Mich	15	3	7	-	4,501	4,165	13	25	2	3	1	-
Wis	12	-	-	-	822	1,671	-	-	-	-	1	-
W N CENTRAL	20	2	2	-	4,123	4,623	7	8	3	1	1	-
Minn	10	-	1	-	704	684	1	1	-	-	-	-
Iowa	-	-	-	-	392	482	1	3	1	-	-	-
Mo	2	1	-	-	2,051	2,196	1	3	1	-	1	-
N Dak	-	-	-	-	23	45	-	-	-	-	-	-
S Dak	-	1	-	-	96	74	-	-	-	-	-	-
Nebr	4	-	1	-	274	279	-	1	-	-	-	-
Kans	4	-	-	-	583	863	4	-	1	1	-	-
S ATLANTIC	300	10	11	1	25,213	21,908	20	62	3	7	-	-
Del	6	-	1	-	366	394	-	-	-	-	-	-
Md	48	2	-	-	2,525	2,692	4	5	-	1	-	-
D C	43	-	-	-	1,665	1,956	1	-	-	-	-	-
Va	25	4	7	1	2,168	2,187	5	4	-	5	-	-
W Va	2	-	2	-	149	259	-	1	-	-	-	-
N C	23	U	1	-	3,466	3,250	U	U	U	U	U	-
S C	7	1	-	-	2,681	1,644	2	14	-	-	-	-
Ga	25	2	-	-	4,364	3,365	1	20	1	-	-	-
Fla	121	1	-	-	7,829	6,161	7	18	2	1	-	-
E S CENTRAL	6	3	6	1	7,123	8,089	3	29	2	1	-	-
Ky	-	-	2	-	767	918	-	5	-	1	-	-
Tenn	-	-	2	-	2,432	3,312	1	16	2	-	-	-
Ala	3	3	2	-	2,384	2,184	2	7	-	-	-	-
Miss	3	-	-	1	1,540	1,675	-	1	-	-	-	-
W S CENTRAL	50	5	5	-	10,982	11,497	66	41	3	16	-	4
Ark	3	-	-	-	1,160	1,124	-	-	-	-	-	-
La	35	1	-	-	2,094	1,985	6	10	-	-	-	-
Okla	11	1	1	-	1,192	1,396	10	7	1	8	-	-
Tex	1	3	4	-	6,516	6,992	50	24	2	8	-	4
MOUNTAIN	62	2	5	-	2,568	2,915	86	56	4	16	-	-
Mont	1	-	-	-	57	84	-	1	-	-	-	-
Idaho	1	-	-	-	82	74	5	2	1	-	-	-
Wyo	1	-	-	-	21	66	1	-	-	-	-	-
Colo	34	1	1	-	544	720	2	6	-	9	-	-
N Mex	9	-	1	-	281	350	15	4	-	-	-	-
Ariz	3	1	3	-	907	829	55	34	1	7	-	-
Utah	5	-	-	-	111	140	7	7	1	-	-	-
Nev	8	-	-	-	565	652	1	2	1	-	-	-
PACIFIC	631	-	5	-	13,007	13,747	52	14	1	-	-	19
Wash	23	U	1	-	742	1,189	U	U	U	U	U	-
Oreg	5	-	-	-	570	518	44	8	1	-	-	-
Calif	587	U	4	-	11,227	11,453	U	U	U	U	U	17
Alaska	2	-	-	-	320	449	8	6	-	-	-	-
Hawaii	14	-	-	-	148	138	-	-	-	-	-	2
Guam	-	U	-	-	26	5	U	U	U	U	U	-
P R	-	1	-	-	288	241	2	9	1	1	-	-
V I	-	-	-	-	27	22	-	1	-	-	-	-
Pac Trust Terr	-	U	-	-	23	-	U	U	U	U	U	-
Amer Samoa	-	U	-	-	12	-	U	U	U	U	U	-

N Not notifiable U Unavailable

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending February 14, 1987 and February 8, 1986

Reporting Area	Malaria	Measles (Rubeola)					Meningococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total									
	Cum. 1987	1987	Cum. 1987	1987	Cum. 1987	Cum. 1986	Cum. 1987	1987	Cum. 1987	1987	Cum. 1987	Cum. 1986	1987	Cum. 1987	Cum. 1986
UNITED STATES	58	2	93	3	23	166	372	323	1,562	35	197	223	2	22	35
NEW ENGLAND	6	1	1	-	5	-	30	1	7	2	5	17	-	-	-
Maine	-	-	-	-	-	-	3	-	-	-	-	1	-	-	-
N.H.	-	-	-	-	-	-	5	1	5	-	1	8	-	-	-
Vt.	-	1	1	-	5	-	3	-	1	1	1	1	-	-	-
Mass.	4	-	-	-	-	-	11	-	-	1	2	4	-	-	-
R.I.	2	-	-	-	-	-	4	-	-	-	-	1	-	-	-
Conn.	-	-	-	-	-	-	4	-	1	-	1	2	-	-	-
MID ATLANTIC	3	-	18	2	16	13	41	4	35	7	29	29	-	-	10
Upstate N.Y.	1	-	-	-	2	2	22	2	12	4	20	20	-	-	6
N.Y. City	-	-	18	-	-	11	3	-	-	-	-	-	-	-	3
N.J.	-	-	-	-	1	-	-	1	10	-	1	-	-	-	1
Pa.	2	-	-	2†	13	-	16	1	13	3	8	9	-	-	-
E.N. CENTRAL	1	-	23	1	1	58	55	131	1,087	1	23	67	1	2	1
Ohio	1	-	-	1§	1	-	23	-	24	-	15	32	-	-	-
Ind.	-	-	-	-	-	-	9	17	126	-	-	3	-	-	-
Ill.	-	-	1	-	-	34	4	81	708	-	-	11	1	1	-
Mich.	-	-	22	-	-	-	18	32	144	1	6	4	-	1	-
Wis.	-	-	-	-	-	24	1	1	87	-	2	17	-	-	1
W.N. CENTRAL	1	-	-	-	-	45	24	19	75	1	18	20	-	-	2
Minn.	-	-	-	-	-	-	4	8	27	-	2	12	-	-	-
Iowa	-	-	-	-	-	-	2	8	30	-	2	2	-	-	-
Mo.	1	-	-	-	-	-	7	1	3	-	7	1	-	-	1
N. Dak.	-	-	-	-	-	-	1	-	-	-	1	2	-	-	-
S. Dak.	-	-	-	-	-	-	1	-	8	-	1	-	-	-	-/q
Nebr.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kans.	-	-	-	-	-	45	9	2	7	1	5	3	-	-	1
S. ATLANTIC	10	-	-	-	-	15	78	1	14	8	43	30	1	1	1
Del.	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Md.	2	-	-	-	-	-	9	-	5	-	-	4	-	-	-
D.C.	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Va.	2	-	-	-	-	-	17	-	-	1	17	4	-	-	-
W. Va.	-	-	-	-	-	-	-	1	5	4	6	-	-	-	-
N.C.	1	U	-	U	-	-	5	U	2	U	15	5	U	-	-
S.C.	-	-	-	-	-	13	6	-	-	-	-	1	-	-	-
Ga.	2	-	-	-	-	-	21	-	1	2	4	11	-	-	-
Fla.	1	-	-	-	-	2	18	-	1	1	1	5	1	1	1
E.S. CENTRAL	1	-	-	-	-	-	20	146	286	-	3	6	-	2	1
Ky.	-	-	-	-	-	-	3	-	45	-	1	1	-	2	1
Tenn.	-	-	-	-	-	-	7	146	220	-	-	1	-	-	-
Ala.	-	-	-	-	-	-	8	-	1	-	-	4	-	-	-
Miss.	1	-	-	-	-	-	2	-	-	-	2	-	-	-	-
W.S. CENTRAL	2	1	1	-	-	-	27	15	28	1	6	7	-	-	5
Ark.	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
La.	-	-	-	-	-	-	3	4	4	-	-	-	-	-	-
Okla.	-	-	-	-	-	-	7	N	N	1	6	7	-	-	-
Tex.	2	1	1	-	-	-	17	10	23	-	-	-	-	-	5
MOUNTAIN	1	-	1	-	1	10	17	5	20	10	19	24	-	1	-
Mont.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	1	-	-	10	10	7	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
Colo.	-	-	-	-	-	-	4	-	2	-	6	3	-	-	-
N. Mex.	-	-	1	-	-	10	1	N	N	-	1	5	-	-	-
Ariz.	-	-	-	-	1	-	10	4	16	-	-	8	-	-	-
Utah	-	-	-	-	-	-	-	1	1	-	-	1	-	1	-
Nev.	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-
PACIFIC	33	-	49	-	-	25	80	1	30	5	51	23	-	16	15
Wash.	2	U	-	U	-	6	17	U	8	U	5	9	U	-	-
Oreg.	-	-	1	-	-	-	10	N	N	-	8	1	-	1	-
Calif.	31	U	48	U	-	18	50	U	22	U	30	11	U	14	15
Alaska	-	-	-	-	-	-	2	-	-	1	2	1	-	-	-
Hawaii	-	-	-	-	-	1	1	1	2	4	6	1	-	1	-
Guam	-	U	1	U	-	-	1	U	-	U	-	-	U	-	-
P.R.	-	-	-	-	-	-	1	-	-	-	4	2	-	-	-
V.I.	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Pac. Trust Terr.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
Amer. Samoa	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending February 14, 1987 and February 8, 1986

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum 1987	Cum 1986	1987	Cum 1987	Cum 1986	Cum 1987	Cum 1987	Cum 1987	Cum 1987
UNITED STATES	3,387	2,794	5	1,745	1,730	10	22	6	322
NEW ENGLAND	64	73	-	32	64	-	2	-	-
Maine	-	3	-	1	10	-	-	-	-
N H	1	3	-	1	3	-	-	-	-
Vt	-	4	-	1	2	-	-	-	-
Mass	36	38	-	6	22	-	2	-	-
R I	-	3	-	3	4	-	-	-	-
Conn	17	22	-	20	23	-	-	-	-
MID ATLANTIC	485	383	-	360	332	-	3	-	49
Upstate N Y	10	20	-	75	63	-	1	-	4
N Y City	310	238	-	165	158	-	-	-	-
N J	63	84	-	66	71	-	2	-	-
Pa	102	21	-	54	40	-	-	-	45
E N CENTRAL	84	94	-	247	258	1	5	1	7
Ohio	9	8	-	44	34	1	2	1	-
Ind	6	24	-	12	31	-	1	-	-
Ill	22	37	-	103	133	-	-	-	2
Mich	12	14	-	82	45	-	2	-	-
Wis	5	11	-	6	15	-	-	-	5
W N CENTRAL	18	23	2	53	20	4	2	-	70
Minn	4	5	-	9	2	-	-	-	15
Iowa	3	3	-	5	2	2	-	-	28
Mo	9	12	1	30	14	2	2	-	2
N Dak	-	2	-	1	1	-	-	-	7
S Dak	-	-	-	2	-	-	-	-	14
Nebr	-	-	-	3	-	-	-	-	2
Kans	-	1	1	3	1	-	-	-	4
S ATLANTIC	1,195	780	-	370	327	1	4	1	82
Del	11	2	-	1	1	-	-	-	-
Md	53	52	-	34	15	-	-	-	22
D C	34	35	-	14	17	-	-	-	3
Va	36	80	-	42	19	1	-	-	24
W Va	-	3	-	13	8	-	1	-	6
N C	80	72	U	36	43	-	1	-	-
S C	88	101	-	48	50	-	-	1	2
Ga	205	139	-	34	35	-	-	-	17
Fla	708	296	-	148	139	-	2	-	9
E S CENTRAL	214	211	-	156	163	-	-	1	17
Ky	1	12	-	34	49	-	-	-	13
Tenn	75	94	-	-	40	-	-	-	-
Ala	59	61	-	63	74	-	-	-	4
Miss	79	44	-	59	-	-	-	1	-
W S CENTRAL	472	622	-	144	186	3	-	3	51
Ark	24	19	-	10	16	-	-	-	14
La	75	109	-	25	71	-	-	-	1
Okla	19	21	-	17	17	3	-	3	1
Tex	354	473	-	92	82	-	-	-	35
MOUNTAIN	82	86	3	39	36	1	-	-	22
Mont	3	-	-	2	1	-	-	-	8
Idaho	1	1	-	6	2	-	-	-	-
Wyo	-	-	-	-	-	-	-	-	11
Colo	12	28	-	-	1	-	-	-	-
N Mex	7	10	-	8	6	-	-	-	-
Ariz	39	31	-	20	17	1	-	-	3
Utah	-	3	2	-	-	-	-	-	-
Nev	20	12	1	3	9	-	-	-	-
PACIFIC	815	563	-	344	344	-	6	-	24
Wash	-	19	U	11	22	-	-	-	-
Oreg	19	15	-	13	13	-	-	-	-
Calif	795	521	U	283	287	-	5	-	23
Alaska	-	-	-	9	5	-	-	-	1
Hawaii	1	8	-	28	17	-	1	-	-
Guam	-	1	U	2	-	-	-	-	-
P R	109	53	-	15	36	-	-	-	5
V I	-	-	-	-	-	-	-	-	-
Pac Trust Terr	-	-	U	1	-	-	3	-	-
Amer Samoa	-	-	U	-	-	-	-	-	-

U Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending February 14, 1987 (6th Week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	739	524	139	41	16	19	65
Boston, Mass.	176	111	37	12	6	10	18
Bridgeport, Conn.	55	38	10	4	1	2	3
Cambridge, Mass.	29	26	1	2	-	-	5
Fall River, Mass.	29	22	6	1	-	-	1
Hartford, Conn.	60	45	9	1	3	2	4
Lowell, Mass.	28	22	5	1	-	-	1
Lynn, Mass.	18	16	2	-	-	-	1
New Bedford, Mass.	31	22	7	2	-	-	3
New Haven, Conn.	58	40	11	6	1	-	-
Providence, R.I.	85	56	19	7	3	-	12
Somerville, Mass.	15	12	3	-	-	-	2
Springfield, Mass.	46	33	11	-	1	1	5
Waterbury, Conn.	46	35	8	2	-	1	5
Worcester, Mass.	63	46	10	3	1	3	5
MID ATLANTIC	2,708	1,747	585	238	65	73	159
Albany, N.Y.	73	59	8	4	1	1	3
Allentown, Pa.	25	18	7	-	-	-	4
Buffalo, N.Y.	95	66	19	7	1	2	12
Camden, N.J.	46	27	13	3	1	2	3
Elizabeth, N.J.	30	19	8	3	-	-	1
Erie, Pa.†	46	33	10	-	1	2	3
Jersey City, N.J.	50	36	9	3	-	2	2
N.Y. City, N.Y.	1,324	810	287	161	38	28	64
Newark, N.J.	68	25	20	10	5	8	4
Paterson, N.J.	26	16	7	3	-	-	1
Philadelphia, Pa.	404	249	106	21	12	16	24
Pittsburgh, Pa.†	61	40	16	4	-	1	5
Reading, Pa.	39	34	4	1	-	-	3
Rochester, N.Y. §	125	100	17	5	1	2	12
Schenectady, N.Y.	25	19	5	-	-	1	1
Scranton, Pa.†	32	24	6	2	-	-	3
Syracuse, N.Y.	132	99	21	6	2	4	5
Trenton, N.J.	46	27	10	3	1	4	2
Utica, N.Y.	18	15	2	1	-	-	1
Yonkers, N.Y.	44	31	10	1	2	-	6
E.N. CENTRAL	2,469	1,845	515	167	55	87	131
Akron, Ohio	81	56	14	3	4	4	-
Canton, Ohio	31	21	9	1	-	-	3
Chicago, Ill.§	564	362	125	45	10	22	16
Cincinnati, Ohio	161	100	38	9	1	13	14
Cleveland, Ohio	195	115	49	19	5	7	3
Columbus, Ohio	168	113	31	12	4	8	11
Dayton, Ohio	109	78	22	4	4	1	10
Detroit, Mich.	309	180	68	37	16	8	11
Evansville, Ind.	44	34	5	4	-	1	1
Fort Wayne, Ind.	55	38	10	5	1	1	4
Gary, Ind.	14	10	1	2	1	-	2
Grand Rapids, Mich.	73	56	14	1	-	2	12
Indianapolis, Ind.	175	118	40	11	2	4	2
Madison, Wis.	27	21	4	1	1	-	8
Milwaukee, Wis.	133	104	24	-	1	4	6
Peoria, Ill.	51	29	15	4	-	3	6
Rockford, Ill.	51	38	8	-	2	3	6
South Bend, Ind.	61	44	11	1	1	4	4
Toledo, Ohio	108	84	16	5	2	1	11
Youngstown, Ohio	59	44	11	3	-	1	-
W.N. CENTRAL	814	581	142	48	13	30	50
Des Moines, Iowa	95	72	14	4	1	4	6
Duluth, Minn.	24	21	2	1	-	-	1
Kansas City, Kans.	37	24	7	5	1	-	-
Kansas City, Mo.	143	96	30	7	3	7	5
Lincoln, Nebr.	36	27	5	1	3	-	2
Minneapolis, Minn.	112	81	16	8	1	6	9
Omaha, Nebr.	86	65	15	1	2	3	9
St. Louis, Mo.	158	107	30	15	-	6	10
St. Paul, Minn.	58	43	11	2	2	-	2
Wichita, Kans.	65	45	12	4	-	4	6
S. ATLANTIC	1,381	910	279	108	31	51	66
Atlanta, Ga.	174	120	29	11	4	10	10
Baltimore, Md.	241	156	62	15	3	5	14
Charlotte, N.C.	113	67	26	10	3	5	6
Jacksonville, Fla.	118	76	23	10	4	3	4
Miami, Fla.	69	32	14	9	8	6	-
Norfolk, Va. §	62	38	16	3	2	3	5
Richmond, Va.	85	50	21	11	-	3	8
Savannah, Ga.	71	48	13	7	1	2	7
St. Petersburg, Fla.	118	99	13	4	1	1	9
Tampa, Fla.	54	36	13	3	-	2	2
Washington, D.C.	238	159	40	23	5	11	3
Wilmington, Del.	38	29	7	2	-	-	-
E.S. CENTRAL	719	458	158	50	19	34	43
Birmingham, Ala.	135	69	36	9	5	16	5
Chattanooga, Tenn.	60	40	12	3	4	1	5
Knoxville, Tenn.	87	63	19	3	1	1	10
Louisville, Ky.	91	56	24	6	1	4	7
Memphis, Tenn.	106	76	21	4	2	3	6
Mobile, Ala.	64	44	6	9	3	2	3
Montgomery, Ala.	58	36	17	3	-	2	1
Nashville, Tenn.	118	74	23	13	3	5	6
W.S. CENTRAL	1,351	844	306	110	52	39	69
Austin, Tex.	65	43	10	8	2	2	10
Baton Rouge, La.	30	20	3		1	1	2
Corpus Christi, Tex.	44	31	9	1	1	2	-
Dallas, Tex.	206	117	50	25	9	5	5
El Paso, Tex.	63	40	15	3	2	3	5
Fort Worth, Tex.	95	61	16	6	8	4	4
Houston, Tex.§	299	169	73	33	13	11	7
Little Rock, Ark.	86	48	27	6	3	2	4
New Orleans, La.	125	77	29	11	6	2	2
San Antonio, Tex.	185	130	43	4	3	5	14
Shreveport, La.	64	43	15	3	1	2	7
Tulsa, Okla.	89	65	16	5	3	-	9
MOUNTAIN	723	480	139	53	26	45	31
Albuquerque, N.Mex.	97	55	15	9	2	16	6
Colo. Springs, Colo.	36	21	7	2	1	5	4
Denver, Colo.	113	77	20	7	4	5	4
Las Vegas, Nev.	107	63	25	12	3	4	10
Ogden, Utah	28	19	5	1	2	1	-
Phoenix, Ariz.	180	111	40	14	8	7	2
Pueblo, Colo.	14	10	3	1	-	-	2
Salt Lake City, Utah	48	26	11	5	3	3	1
Tucson, Ariz.	100	78	13	2	3	4	2
PACIFIC	2,196	1,489	404	166	66	58	142
Berkeley, Calif.	14	9	2	1	1	1	1
Fresno, Calif.	113	81	17	6	5	4	9
Glendale, Calif.	25	18	4	2	1	-	2
Honolulu, Hawaii	87	54	22	4	3	4	11
Long Beach, Calif.	181	123	38	7	8	5	25
Los Angeles, Calif.	632	427	106	55	23	7	23
Oakland, Calif.	74	57	13	3	1	-	8
Pasadena, Calif.	40	32	6	1	-	1	4
Portland, Oreg.	148	109	24	12	-	3	10
Sacramento, Calif.	124	89	22	9	3	1	11
San Diego, Calif.	138	89	28	12	5	4	12
San Francisco, Calif.	158	97	33	23	3	1	3
San Jose, Calif.	165	104	38	11	3	9	10
Seattle, Wash.	178	122	31	10	8	7	4
Spokane, Wash.	66	46	7	5	2	6	7
Tacoma, Wash.	53	32	13	5	-	3	2
TOTAL	13,100††	8,658	2,667	991	343	434	756

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza.

† Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

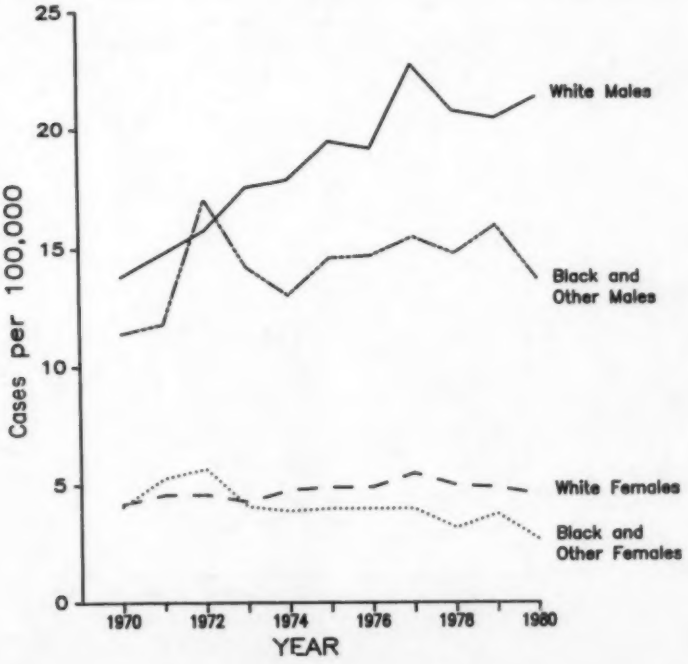
Surveillance Summary

Youth Suicide — United States, 1970-1980

Between 1970 and 1980, 49,496 of the nation's youth (15-24 years of age) committed suicide. The suicide rate for this age group increased 40% (from 8.8 deaths per 100,000 population in 1970 to 12.3/100,000 in 1980), while the rate for the remainder of the population remained stable. Young adults (20-24 years of age) had approximately twice the number and rate of suicides as teenagers (15-19 years old).

This increase in suicide for persons 15-24 years of age is due primarily to an increasing rate of suicide among young males: rates for males increased by 50% (from 13.5 to 20.2) compared with a 2% increase for females (4.2 to 4.3), so that by 1980, for this age group, the ratio of suicides committed by males to those committed by females was almost 5 to 1 (Figure 3). Most (89.5%) young male suicide victims were white. Moreover, the white male group showed a marked upward trend in suicide rates from 1970 to 1980; in fact, suicide rates for young white men have increased in each of the past three decades. Although rates

FIGURE 3. Suicide rates for all persons 15-24 years of age, by race and sex — United States, 1970-1980



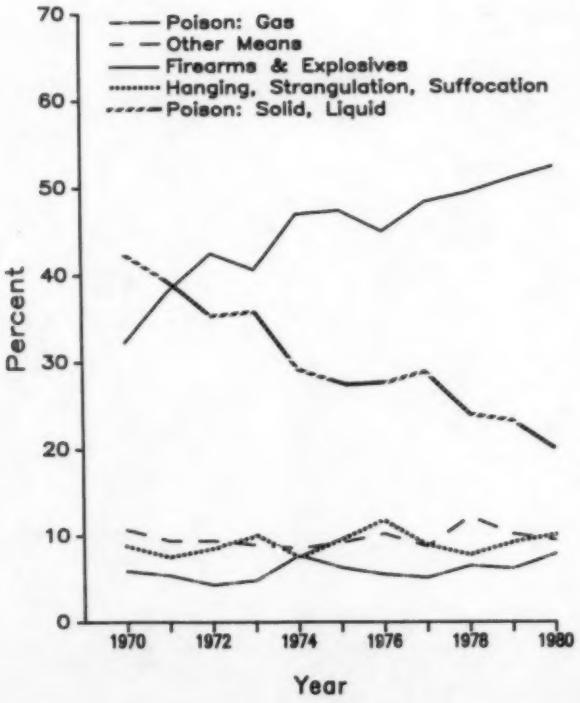
Youth Suicide – Continued

increased for young males of black and other races, their rates remained lower than rates for young white males. Rates for young white females and for females of black and other races were approximately equal and relatively stable over time.

The western United States had consistently higher youth suicide rates from 1970 to 1980 than the other three regions (North Central, Northeastern, and Southern). However, this difference in rates had narrowed substantially by 1980 because rates for each of the other regions increased over the period.

The method of suicide changed significantly from 1970 to 1980. The proportion of suicides committed with firearms increased for both young males and females (15-24 years old), and the proportion of both males and females committing suicide by poisoning declined. The changes were more marked among females, who, in the past, have most commonly committed suicide by poisoning (Figure 4).

FIGURE 4. Percentage of suicides for females 15-24 years of age, by method of suicide – United States, 1970-1980



Youth Suicide – Continued

Data show that among persons 15-24 years of age, young white male adults (20-24 years old) have the highest suicide risk. Further research is needed to explain the marked increase in suicide among young white males, to characterize their deaths more precisely, and to develop and evaluate effective ways to prevent these deaths.

Copies of the entire Youth Suicide Surveillance Summary: 1970-1980 (issued November 1986) are available from the Division of Injury Epidemiology and Control, Center for Environmental Health, Centers for Disease Control, Atlanta, Georgia 30333, telephone number (404) 454-4690, FTS 236-4690.

Epidemiologic Notes and Reports

PCB Contamination of Ceiling Tiles in Public Buildings — New Jersey

A fire on August 25, 1985, in a chemical storage vault at a New Jersey college resulted in contamination of one wing of a large multi-purpose building (175,000 square feet) with mercury, nitrobenzene, and pyridine. Elevated levels of polychlorinated biphenyls (PCBs) were also found in the debris without an identified source (PCBs were not stored in the vault). During decontamination by a contractor, gas chromatography/mass spectography of the debris showed PCB levels ranging from 100 to 750 parts per million (ppm). Additional sampling showed PCB levels of 2,000 ppm in lubricating grease from the air-handling units. Three other wings of the building also showed PCB contamination in the air, on surfaces, and in bulk samples of grease and ceiling tile although no evidence of fire or smoke damage was present in these areas. Each wing has multiple air-handling units that are separate and distinct from those where the fire occurred.

On October 11, 1985, the Public Employees Occupational Safety and Health Project of the New Jersey Department of Health (NJDH) was called to help identify the source of PCBs. NJDH subsequently asked the National Institute for Occupational Safety and Health (NIOSH) to provide technical assistance in the environmental assessment. Air samples taken before cleanup showed PCB levels ranging from 0.2 $\mu g/m^3$ to 1.6 $\mu g/m^3$ in various areas of the building; surface-wipe samples from the same areas and time period showed levels of 0.1 $\mu g/100\ cm^2$ to 7.2 $\mu g/100\ cm^2$. Samples taken after cleanup indicated that the cleanup process had been adequate in some areas but not in others. Some PCB levels were even higher than before cleanup (air: 0.8 $\mu g/m^3$-3.9 $\mu g/m^3$; surfaces: 0.7 $\mu g/100\ cm^2$-10.5 $\mu g/100\ cm^2$).

Although the post-cleanup results did not help to identify the source of PCB contamination, the problem appeared to be ongoing. After reviewing the sampling results from different areas, a secretary at the college noticed a similarity in the ceiling tiles in those areas with high PCB levels. In February 1986, a consultant hired by the college pursued the secretary's obser-

PCB — Continued

vation and evaluated ceiling tiles throughout the school. Those areas with consistent evidence of contamination had hidden-spline ceilings with 1'x 2' and 1'x 4' tiles.

Representatives from the New Jersey Department of Environmental Protection and the Environmental Response Team of the U.S. Environmental Protection Agency (EPA) assisted the NJDH in conducting a quality control review of the consultant's sample collection and preparation. Analytical results from both the EPA contract laboratory and the consultant's laboratory showed extremely high levels of PCBs (15,300 ppm- 51,000 ppm) in samples scraped from the painted surface of the 1'x 2' and 1'x 4' ceiling tiles. These tiles were identified as Armstrong Travertone Sanserra.

In meetings on March 24 and April 1, 1986, representatives from Armstrong World Industries, Inc. indicated that Aroclor 1254 (a commercial formulation of PCBs) had been added to a prime coating formulation used on three types of ceiling tiles (Travertone Sanserra, Santaglio, and Embossed Design) that were manufactured in 1969 and 1970. These tiles had been marketed throughout the country for use in commercial buildings.

The NJDH conducted bulk sampling throughout New Jersey of 65 different ceiling tiles from 25 buildings, including seven county and state colleges, 16 state office buildings, and two hospitals. They analyzed Travertone Sanserra tiles installed in these buildings in the late 1960s and early 1970s but found no detectable levels of PCBs (detection limit: 5 ppm).

NJDH representatives met with the college staff working in the contaminated building to discuss the levels of PCBs found in the building and the possible effects of PCB contamination. All employees were offered office space in other campus facilities; several pregnant women were relocated. Eleven maintenance employees were at high risk because of working either on the building's ventilation system or directly with the contaminated tiles. Laboratory tests of sera from these workers showed blood levels of PCBs ranging from 5.2-10.3 parts per billion. These levels are comparable to those found in the general public and do not reflect excessive exposure. Maintenance workers were provided with special protective equipment for future use.

The college is implementing a plan to remove PCB-containing tiles and to decontaminate the surfaces in affected areas. Armstrong has agreed to take financial responsibility for these precautions. The criteria after decontamination will be PCB levels of $\leq 1\ \mu g/m^3$ in air and $\leq 0.5\ \mu g/100\ cm^2$ on surfaces*.

Reported by J Fagliano, A Freund, K O'Leary, KD Rosenman, V Runnion, Div of Occupational and Environmental Health, New Jersey Dept of Health; Environmental Response Team, US Environmental Protection Agency; Div of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health, CDC.

Editorial Note: Although epidemiologic evidence is inconclusive (*3*), animal studies have revealed that PCBs are "probable" human carcinogens (*4*), and adverse reproductive effects have been found in experimental animals (*5-8*). For airborne PCBs, the Occupational Safety and Health Administration has promulgated a permissible exposure limit of from 0.5 mg/m^3 (54% chlorine content) to 1 mg/m^3 (42% chlorine content) as an 8-hour time-weighted aver-

*The $\leq 1\ \mu g/m^3$ PCBs in air is the NIOSH-recommended exposure limit (*1*), and $\leq 0.5\ \mu g/100\ cm^2$ on surfaces is the reoccupancy guideline for the New Mexico State Highway Department Building, Santa Fe, as developed in 1985 by the Governor's Expert Advisory Panel and accepted by the New Jersey Department of Health (*2*).

PCB — Continued

age (*9*). NIOSH recommends that airborne exposure to PCBs in the workplace be limited to ≤1 $\mu g/m^3$, the minimum reliably detectable concentration (*9*). Although no standard evaluation criteria have been set for industrial surfaces contaminated with PCBs, EPA has recently proposed a limit of 100 $\mu g/m^2$ in high-use areas where "people can make frequent and regular skin contact with surfaces".

Fires involving transformers that contain PCBs have been reported as a source of PCB contamination in office buildings (*10-12*). This is the first report of PCB contamination resulting from ceiling tiles. Although the contamination was discovered during sampling for chemical contamination after a fire in a chemical storage area, the following evidence strongly implicates ceiling tiles as the source of PCBs: 1) although the fire was localized in one wing, PCB contamination was found throughout the building; 2) each wing of the building has multiple, separate air-handling units; and 3) samples scraped from the surface of new ceiling tiles from a box that had not been opened previously showed a concentration of 30,000 ppm PCBs.

According to Armstrong's records, they used the PCB formulation as a flame retardant and plasticizer on approximately 6 million square feet of tile produced in 1969 and 1970, representing 1% to 2% of their tile output in those years. Aroclor 1254 was present in the coating formulation at concentrations ranging from approximately 4.4% to 12.3%, by weight. The coating was used on 1'x 1', 1'x 2', 1'x 4', and 2'x 2' tiles but not on the 2'x 4' tiles most commonly found in commercial buildings. Armstrong's records do not indicate where the remainder of the tiles were used.

Building owners should check to see whether they have tiles of this brand, size, and age and, if so, should submit a portion of tile to a certified analytical laboratory for PCB analysis.

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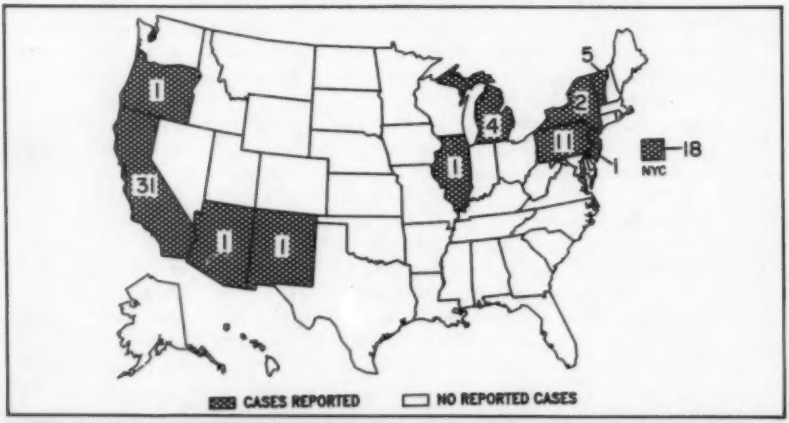
FIGURE I. Reported measles cases — United States, weeks 02-05, 1987



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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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